



**Billing Code 4310–55**

## **DEPARTMENT OF THE INTERIOR**

### **Fish and Wildlife Service**

**[FWS–R2–ES–2013–N278; FXES11130200000C2–112–FF02ENEH00]**

### **Endangered and Threatened Wildlife and Plants; Texas Ayenia Draft Recovery Plan**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of availability; request for comment.

**SUMMARY:** We, the Fish and Wildlife Service (Service), announce the availability of our draft recovery plan for the Texas ayenia (also referred to as the Tamaulipan kidneypetal), which is listed as endangered under the Endangered Species Act of 1973, as amended (Act). This plant species is currently found in southern Texas and in northern Mexico. The draft recovery plan includes specific recovery objectives and criteria to be met in order to enable us to remove this species from the list of endangered and threatened wildlife and plants. We request review and comment on this plan from local, State, and Federal agencies; Tribes; and the public. We will also accept any new

information on the status of the Texas ayenia throughout its range to assist in finalizing the recovery plan.

**DATES:** To ensure consideration, we must receive written comments on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. However, we will accept information about any species at any time.

**ADDRESSES:** If you wish to review the draft recovery plan, you may obtain a copy by any one of the following methods:

*Internet:* Go to [http://www.fws.gov/southwest/es/ElectronicLibrary\\_ListDocs.cfm](http://www.fws.gov/southwest/es/ElectronicLibrary_ListDocs.cfm) and download the following file: Texas Ayenia\_Draft\_Recovery\_Plan\_Dec\_2013.pdf;

*U.S. mail:* U.S. Fish and Wildlife Service, 6300 Ocean Drive, USFWS Unit 5837, Corpus Christi, TX 78412-5837; or

*Telephone:* (361) 994-9005.

If you wish to comment on the draft recovery plan, you may submit your comments in writing by any one of the following methods:

- *U.S. mail:* Field Supervisor, at the above address;
- *Hand-delivery:* Texas Coastal Ecological Services Office, at the above address;
- *Fax:* (361) 994-8262; or
- *E-mail:* [chris\\_best@fws.gov](mailto:chris_best@fws.gov).

For additional information about submitting comments, see the “Request for Public Comments” section below.

**FOR FURTHER INFORMATION CONTACT:** Chris Best, State Botanist, at the above address and phone number, or by e-mail at *chris\_best@fws.gov*.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

Recovery of endangered or threatened animals and plants to the point where they are again secure, self-sustaining members of their ecosystems is a primary goal of our endangered species program and the Act (16 U.S.C. 1531 et seq.). Recovery means improvement of the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act. The Act requires the development of recovery plans for listed species, unless such a plan would not promote the conservation of a particular species.

### **Species History**

Texas ayenia (*Ayenia limitaris*), found in semi-arid, subtropical Tamaulipan shrublands of south Texas and northeast Mexico, was federally listed as endangered on August 24, 1994 (effective date September 23, 1994). The plant was listed throughout its range, including southern Texas and northeastern Mexico. However, Texas ayenia is not listed under Mexican protected species regulations by the Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT; the Mexican government equivalent to the U.S. Fish and Wildlife Service). The United States Federal listing established a Recovery Priority Number (RPN) of 5, and did not designate critical habitat. The USFWS's 2010 5-

year review for this plant revised the RPN to 8C and recommended adopting “Tamaulipan kidneypetal” as a more appropriate common name.

Texas ayenia is a spineless sub-shrub that ranges from 0.3 meters (1 foot) to 2 meters (6.6 feet) tall. Flowers are cream-colored with 5 petals; alternate leaves are soft and heart-shaped, with minute hairs and toothed margins; and older, woody stems are reddish-brown, up to 2 centimeters (0.8 inches) thick, and dotted with small, cream-colored bumps, or lenticels. Flowering follows a bimodal pattern (spring to early summer and fall), which coincides with regional rainfall patterns. Although the reproduction biology is unknown, Texas ayenia probably requires outcrossing through insect pollination. The species responds well to propagation, and a few pilot reintroductions have become successfully established. Propagated plants that are isolated from natural populations reproduce successfully, indicating that pollination vectors are present.

Occupied habitats are isolated fragments of woodlands and shrublands in the watersheds and deltas of rivers draining into the Gulf of Mexico. Wild populations of Texas ayenia have been documented in a wide range of alluvial soil types, from fine sandy loam to heavy clay. The species grows under varying amounts of shade, in association with other shrub species, but are most vigorous and reproduce more successfully in sites that receive at least several hours of direct sunlight daily. The species’ range appears to be restricted by increasing aridity further inland and by the prevalence of freezing weather further north and at higher elevations in the mountain ranges of northeast Mexico. However, the vegetation of the Tamaulipan region in Texas

and northeast Mexico has been altered by poor rangeland management since the onset of European colonization in 1750. The distribution and abundance of Texas ayenia may have been impacted by increased woody plant cover and lack of wildfire, and its extant relict habitats might not be optimal. Introduced invasive grasses, particularly guineagrass, are abundant and highly competitive in the remaining occupied habitats.

Within the United States, Texas ayenia has been documented only within the three southernmost counties of Texas: Cameron, Hidalgo, and Willacy. Between 1888 and 1963, Texas ayenia was observed at seven sites in Cameron and Hidalgo Counties, Texas; however, the species has not been observed in these locations for more than 40 years and is presumed extirpated from these sites. Between 1992 and 2001, five extant populations were discovered in Cameron, Hidalgo, and Willacy Counties, Texas, and have been monitored periodically. Two of these sites are located on well-managed private land, one site is on a National Wildlife Refuge, one site is in a city park, and one site is on a State Park managed by Texas Parks and Wildlife Department. Four of these populations range from 100 to 200 individuals each, and the fifth site has at least 1,000 individuals.

In 2005, 9 extant populations, totaling at least 4,000 individuals, were documented and mapped in the *municipio* (similar to a county) of Soto la Marina, Tamaulipas, Mexico. An additional unconfirmed population of unknown size has been reported from the *municipio* of González, Tamaulipas. One population reported from Coahuila, Mexico, has apparently been extirpated. The species was also reported from

Topia, Durango, in 1985, but it has not been observed there since then; its status is unknown, and it is also possible that the identification or site location may be in error. Given that about 99 percent of the potential range of Texas ayenia occurs in Mexico, with many of the known populations occurring on privately owned lands and *ejido* (community-owned) lands, successful recovery of the species will depend on significant voluntary involvement and collaboration of private landowners and *ejidos* in Mexico.

The single greatest threat to Texas ayenia is the loss of habitat to agricultural and urban development. In the Rio Grande delta of Texas and Tamaulipas, as little as 1 percent of the original habitat remains intact (USFWS 2010; Jarsdoerfer and Leslie, Jr. 1988). Fragmentation and isolation of remaining suitable areas may prevent gene flow among populations and lead to a depletion of genetic diversity. Introduced invasive grasses, particularly guineagrass, compete directly with Texas ayenia, severely limiting its growth and reproduction, and may contribute to the extirpation of populations. Oil and gas exploration and extraction continues at a rapid pace throughout much of south Texas and northeast Mexico, and an ever-increasing proportion of the land has or will be cleared for drilling platforms, pipelines, access roads, and related infrastructure. In addition to the direct loss of populations and habitat through land clearing, these operations will increase the fragmentation of habitat and will create new colonization pathways for invasive grasses. Texas ayenia populations on private lands are particularly vulnerable, since the Act does not protect endangered plants on private lands unless there is another form of prevailing Federal nexus, such as a federally funded program or regulated action. Texas ayenia is restricted to warm regions of higher rainfall within its

range along the Gulf of Mexico, indicating that it is susceptible to sub-zero temperatures and drought. At this time, we do not know how past climate changes have affected Texas ayenia populations and distribution, nor can we predict how future climate changes, forecast by a range of models, will affect the ecology of the species and its habitat. For example, a reduced amount or frequency of rainfall could reduce the species' range, while a decreased incidence of freezing could expand its range. However, it is possible that threats induced by climate changes may arise in the future.

The strategy for recovery of Texas ayenia consists of: protection, conservation, monitoring, and improved management of extant populations in the United States and Mexico; coordination and collaboration with government agencies, academic institutions, and nongovernmental conservation organizations in both the United States and Mexico; outreach, collaboration, and support for conservation-minded private landowners and *ejidos* in the United States and in Mexico; and habitat restoration and population augmentation and reintroduction to attain the number and size of populations necessary to assure the continued survival of the species, and to establish ecological corridors necessary for gene flow between and among populations.

### **Recovery Plan Goals**

The objective of an agency recovery plan is to provide a framework for the recovery of a species so that protection under the Act is no longer necessary. A recovery plan includes scientific information about the species and provides criteria and actions necessary for us to be able to reclassify the species to threatened status or remove it from the List. Recovery plans help guide our recovery efforts by describing actions we

consider necessary for the species' conservation, and by estimating time and costs for implementing needed recovery measures. To achieve its goals, this draft recovery plan identifies the following objectives:

- Mitigate habitat loss and degradation, invasive species competition, poor rangeland management, and other threats to the continued survival of Texas ayenia, based on partnerships, outreach, and application of scientific investigations and adaptive management.
- Conserve, restore, and manage appropriately the quantity and quality of habitat needed for the continued survival of Texas ayenia, including native vegetation restoration and creation of functioning ecological corridors.
- Conserve, protect, and restore populations of Texas ayenia needed for its continued survival. Monitored populations must be self-sustaining, of sufficient size to endure climatic variation and stochastic events, and of sufficient number to endure catastrophic losses, and must represent the full range of the species' geographic and genetic variability.

The draft recovery plan contains recovery criteria based on maintaining and increasing population numbers and habitat quality and quantity and mitigating significant threats to the species. The draft recovery plan focuses on protecting populations, managing threats, maintaining habitat, monitoring progress, and building partnerships to facilitate recovery. When the recovery of Texas ayenia approaches these criteria, we will review the species' status and consider downlisting, and, ultimately, removal from the list of federally threatened and endangered species.



## **Request for Public Comments**

Section 4(f) of the Act requires us to provide public notice and an opportunity for public review and comment during recovery plan development. It is also our policy to request peer review of recovery plans (July 1, 1994; 59 FR 34270). In an appendix to the approved recovery plan, we will summarize and respond to the issues raised by the public and peer reviewers. Substantive comments may or may not result in changes to the recovery plan; comments regarding recovery plan implementation will be forwarded as appropriate to Federal or other entities so that they can be taken into account during the course of implementing recovery actions. Responses to individual commenters will not be provided, but we will provide a summary of how we addressed substantive comments in an appendix to the approved recovery plan.

We invite written comments on the draft recovery plan. In particular, we are interested in additional information regarding the current threats to the species and the costs associated with implementing the recommended recovery actions.

Before we approve our final recovery plan, we will consider all comments we receive by the date specified in DATES above. Methods of submitting comments are in the ADDRESSES section above.

## **Public Availability of Comments**

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly

available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Comments and materials we receive will be available, by appointment, for public inspection during normal business hours at our office (see ADDRESSES).

### **References Cited**

A complete list of all references cited herein is available upon request from the U.S. Fish and Wildlife Service, Branch of Recovery (see **FOR FURTHER INFORMATION CONTACT** section).

**Authority**

We developed our draft recovery plan under the authority of section 4(f) of the Act, 16 U.S.C. 1533(f). We publish this notice under section 4(f) Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

**Dated:** June 13, 2014.

Joy E. Nicholopoulos,  
Acting Regional Director, Southwest Region,  
Fish and Wildlife Service.

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